

Remarks

Applicants have submitted corrected Figures 1 and 4 which they believe overcome the Draftsman's objections to those previously submitted.

Claims 1 and 21 were amended to indicate that the regenerated but not re-activated catalyst is a cobalt catalyst and that it is introduced into a slurry HCS reactor. Support for these amendments can be found in paragraph [0015].

Claims 2 to 4 were amended to place them in better form.

Claims 5 to 8 and 14 to 17 were cancelled.

Claims 9 and 18 were amended to place them in better form in view of the amendments to claims 11 and 21 from which they respectively depend.

Claims 5 to 8 and 14 to 17 were cancelled.

Finally new claims 27 and 28 are presented support for which can be found in paragraph [0032].

The Examiner's objections to claims 11 to 19 and 22 to 26 are obviated by the amendments to claims 11 and 23.

Regarding the Examiner's rejection of claim 20 under 35 USC 112, second paragraph, the applicants believe amendment to claim 20 overcomes that rejection.

Turning now to the Examiner's rejection of claims 1 to 3 and 5 to 19 under 35 USC 102(b) based on Hsia (US 5,260,239) applicants respectfully submit that for reasons set forth below the rejection should be withdrawn.

At the outset it should be noted that rejuvenation and regeneration of catalysts are distinctly different processes. As described in Hsia rejuvenation involves hydrogen treatment (Col. 2, lines 27 to 30) whereas regeneration involves oxidation followed by a hydrogen activation step (Col. 2, lines 22 to 25). Applicants make the same distinction (cf paragraphs [0011] and [0012] for example).

Applicants' invention is directed toward a process for activating a regenerated but not reactivated cobalt catalyst. This is achieved by introducing the regenerated but not activated catalyst into an HCS slurry reactor that is operating at HCS slurry process conditions. The fact that a regenerated cobalt catalyst can be successfully activated in an HCS slurry reactor under HCS operating conditions is quite surprising because, as demonstrated in the instant application, a fresh catalyst has to be reduced ex situ of the HCS reactor to become fully activated. One would not expect, therefore, that a regenerated catalyst could be activated as described and claimed in the instant application. Importantly, Hsia does not disclose or suggest activating a regenerated catalyst in an HCS slurry reactor operating under HCS process conditions.

Hsia discloses rejuvenating a catalyst and not activating a regenerated catalyst. Hsia accomplishes the catalyst rejuvenation in a reactor that is external the HCS reactor. Applicants, in contrast, conduct their activation in the HCS reactor under HCS operating conditions. Thus, Hsia fails to anticipate the instant invention.

The Examiner also rejected claims 4 and 20-28 under 35 USC 103(a) as unpatentable over Hsia in view of Bauman (US 5,844,005). Applicants respectfully request the Examiner to reconsider and withdraw that rejection.

Both Hsia and Bauman are concerned with the rejuvenation of an HCS catalyst and not with the activation of a regenerated HCS catalyst. Hsia discloses rejuvenating an HCS catalyst ex situ an HCS reactor and Bauman discloses rejuvenation using the HCS reactor tail gas. Neither of these references, alone or in combination, remotely disclose or suggest activating a regenerated catalyst in an HCS reactor having rejuvenation means and operating under HCS slurry process conditions. Indeed, applicants' examples demonstrate that a fresh cobalt catalyst cannot be fully activated under HCS slurry process conditions. Consequently it is quite surprising and totally unexpected that a regenerated cobalt catalyst could be. Clearly applicants' claims are not rendered obvious by the cited references.

In view of the foregoing amendments and comments applicants respectfully submit the claims in issue are patentable and applicants request the Examiner to pass the case to issue.

Respectfully submitted,



Estelle C. Bakun

Attorney for Applicant(s)

Registration No. 35,054

Telephone Number: (908) 730-3635

Facsimile Number: (908) 730-3649

☒ Pursuant to 37 CFR 1.34(a)

ExxonMobil Research and Engineering Company
P. O. Box 900
Annandale, New Jersey 08801-0900

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